A.D. 1882. Feb. 24. N° 893.
JAMIESON'S Specification.

(2 SHEETS)
SHEET 1

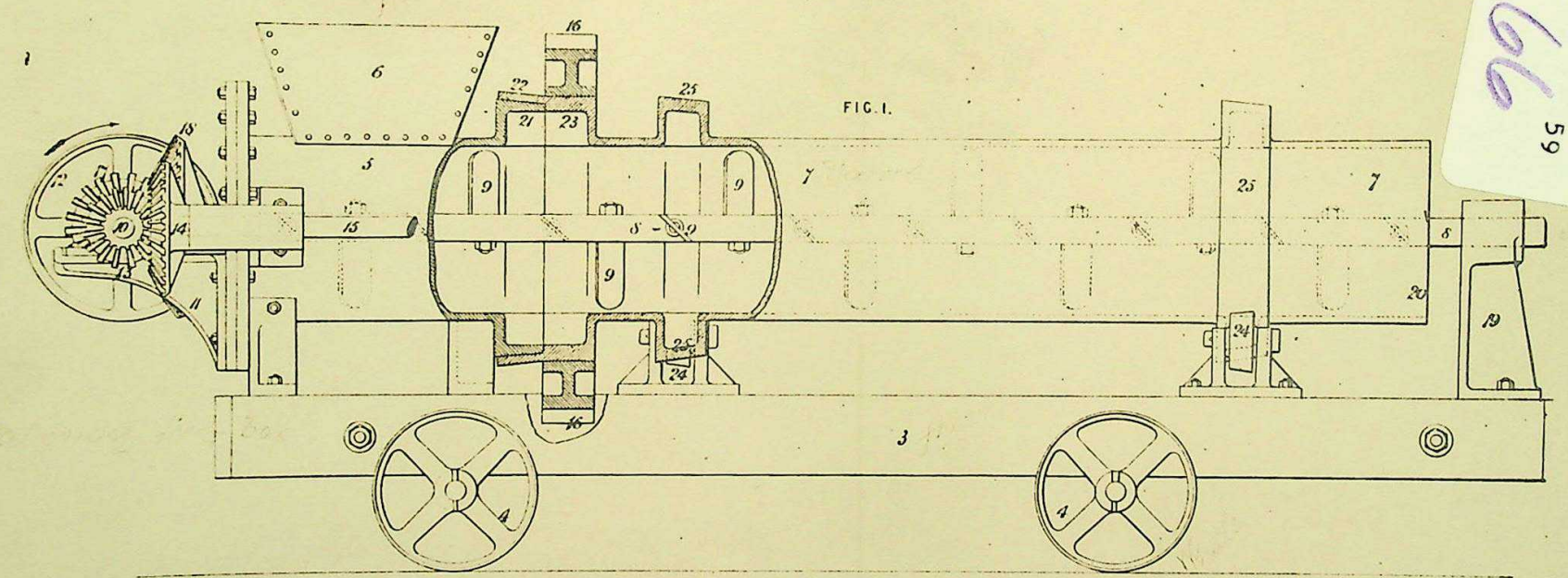

FIG. 1.

259-178R
366-96
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(1) 106, Artificial Stone, Mortar Mixers.

893

259-178R

London: Printed by George Edward Eyre and William Spottiswoode
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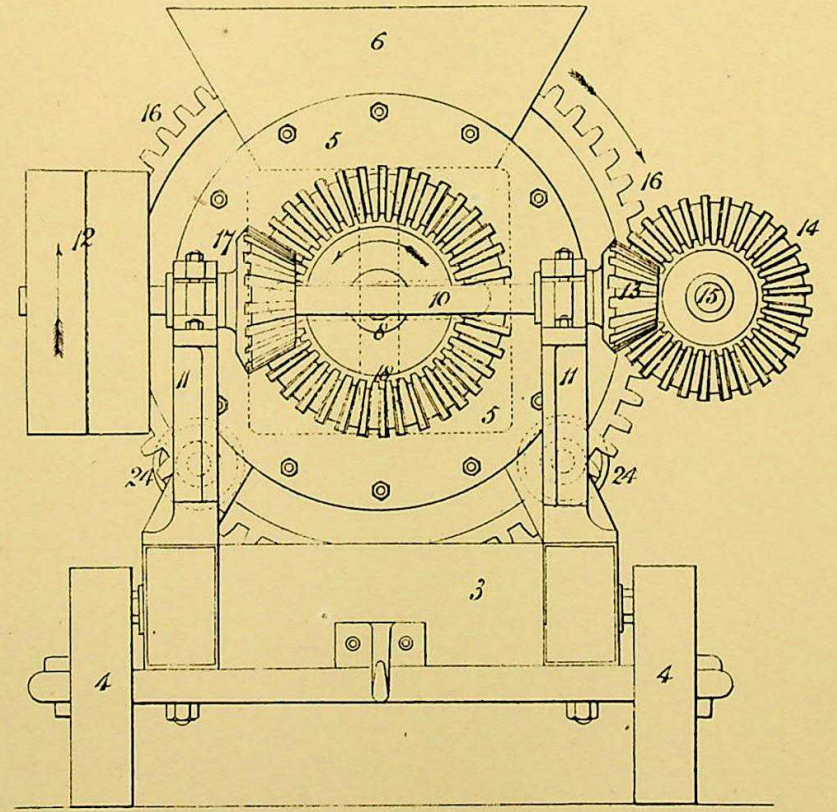
Malby & Sons, Photo-Litho.

FIG. 2.



Fast & loose pulleys

London Printed by George Edward Eyre and William Spottiswoode.
Printers to the Queen's most Excellent Majesty. 1882

Malby & Sons, Photo-Litho.

A.D. 1882, 24th FEBRUARY. N° 893.

Apparatus for Mixing Concrete.

LETTERS PATENT to Andrew Jamieson, of Blantyre, in the County of Lanark, North Britain, Engineer, for an Invention of "IMPROVEMENTS IN APPARATUS FOR MIXING CONCRETE."

PROVISIONAL SPECIFICATION left by the said Andrew Jamieson at the Office of the Commissioners of Patents on the 24th February 1882.

ANDREW JAMIESON, of Blantyre, in the County of Lanark, North Britain, Engineer. "IMPROVEMENTS IN APPARATUS FOR MIXING CONCRETE."

This Invention has for its object to improve the construction and action of apparatus for mixing concrete, so that the materials may be thoroughly mixed in an expeditious and continuous manner.

The improved apparatus comprises a hopper to receive the materials for composing the concrete, this hopper communicating with a stationary box which is at the entrance end of a cylinder or barrel; and this cylinder or barrel which is horizontal or more or less inclined is made to rotate and has passing through it a shaft armed with helical or screw blades. The cylinder and the bladed shaft are by suitable gearing made to rotate in opposite directions and their joint action produces the complete intermixture of the materials and at the same time causes them to move along the cylinder so as to be delivered from the open end thereof in a finished state and in a continuous manner.

The stationary box is formed with a cylindrical spigot-like rim to enter the end of the rotating cylinder or barrel the joint surfaces between the two being made truly cylindrical, whilst a check ring or step may be formed or fixed inside the cylinder or barrel to bear against the rim of the stationary box.—The cylinder or barrel supported on rollers being formed with belts—to rest on the rollers, and the shaft and the supporting rollers are by preference made conical so as to tend to keep the cylinder or barrel close up to the stationary box. The internal surface of the cylinder or barrel may be made cylindrical or polygonal or ribbed, the ribbed forms being intended to insure the more complete turning over of the materials by the rotation of the barrel.

SPECIFICATION in pursuance of the conditions of the Letters Patent file by the said Andrew Jamieson in the Great Seal Patent Office on the 22nd August 1882.

ANDREW JAMIESON, of Blantyre, in the County of Lanark, North Britain Engineer. "IMPROVEMENTS IN APPARATTUS FOR MIXING CONCRETE."

My said Invention has for its object to improve the construction and action of apparatus for mixing concrete, so that the materials may be thoroughly mixed in a expeditious and continuous manner.

My improved apparatus comprises a hopper to receive the materials for composing the concrete; this hopper communicating with a stationary feed box which is at the entrance end of a long cylinder, barrel, or box; and this cylinder barrel, or box, which is horizontal or more or less inclined is made to rotate and has passing through it a shaft armed with helical or screw blades. The materials are delivered at the further end of the cylinder, barrel, or box after being thoroughly intermixed. The internal surface of the cylinder, barrel, or box may be made cylindrical, polygonal, or ribbed, the polygonal or ribbed forms being intended to insure the more complete turning over of the materials by the rotation of the barrel.

And in order that my said Invention and the manner of performing the same may be properly understood I hereunto append two sheets of explanatory drawings to be hereinafter referred to and representing a modification of my improved apparatus.

Figure 1, of the accompanying drawings is a sectional side elevation and figure, 2, an end elevation. In these drawings the same reference numerals are used to mark the same or like parts wherever they are repeated.

In the drawings my improved machine is shown in a portable form being carried on a strong wooden frame, 3, which is mounted on wheels, 4. At the entering end of the machine there is a stationary feed box, 5, which is square in transverse vertical section, and which has fixed on the top of it a hopper, 6, to receive the materials which are to form the concrete. The stationary feed box, 5, is at the entering end of a barrel, 7, which, in the example shown in the drawings is for the most part square in transverse vertical section and is placed horizontally. The barrel, 7, is made to rotate and has passing through it a shaft, 8, armed with helical or screw blades, 9, and which shaft is made to rotate in an opposite direction to that of the rotation of the barrel, 7. The first-motion shaft of the machine is a transverse horizontal shaft, 10, carried in bearings, 11, at the back end of the machine and having on it fast and loose pulleys, 12, for a driving belt. A pinion, 13, on one end of the shaft, 10, gears with a bevil wheel, 14, on a short shaft at one side of the machine; and a pinion on the side shaft, 15, gears with a ring of spur teeth formed or fixed on the barrel, 7, at its entering end. A pinion, 17, on the shaft, 10, gears with a bevil wheel 18, on the shaft, 8, which passes along the axis of the barrel, 7, this shaft, 8, being carried in one bearing at the end of the box, 5, and in another bearing, 19, which is beyond the open end, 20, of the barrel, 7. The joint action of the bladed shaft, 8, and barrel, 7, rotating in opposite directions produces the complete intermixture of the materials and at the same time causes them to move along the barrel and be delivered from the open end, 20, thereof in a finished state and ready for use.

The stationary feed box, 5, is formed with a cylindrical spigot, 21, which enters the open end, 22, of the barrel, 7, the joint surfaces between the